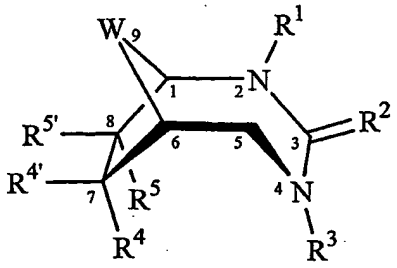
AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula (I):



(I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^1 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(e) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(f) R^3 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(g) alternatively if R^2 is NR', then R^1 or R^3 can come together with NR' to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(h) if R^2 is CR'_2, then R^1 or R^3 can come together with CR'_2 to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(i) if R^2 is CR'_2, then R^1 and R^3 can come together with CR'_2 to form a substituted or unsubstituted bicyclic ring that can include one or more heteroatoms; and

(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

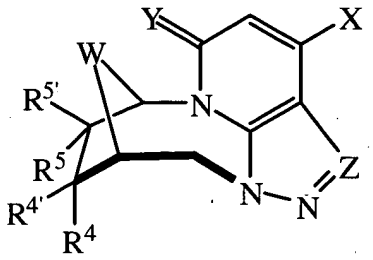
2. (Withdrawn): The method of claim 1, wherein R^5 and/or $R^{5'}$ is OH.

3. (Withdrawn): The method of claim 1, wherein R^5 or $R^{5'}$ is a residue of an amino acid.

4. (Withdrawn): The method of claim 3, wherein the amino acid is valine.

5. (Withdrawn): The method of claim 3, wherein the amino acid is L-valine.

6. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the general formula 1 (A-D), 2 (A-D), 3 (A-B), 4 (A-B), 5 (A-B), 6 (A-B), 7 (A-C) or 8 (A):



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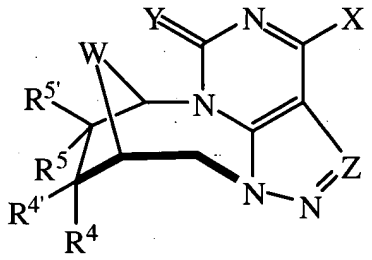

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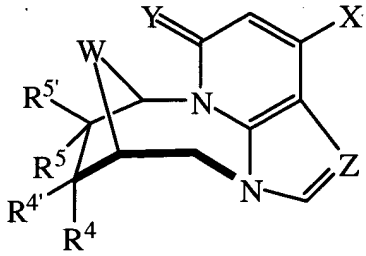

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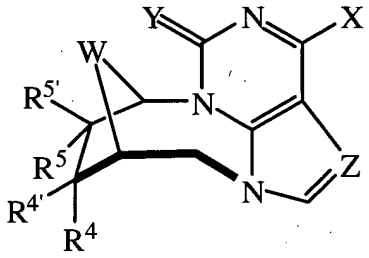

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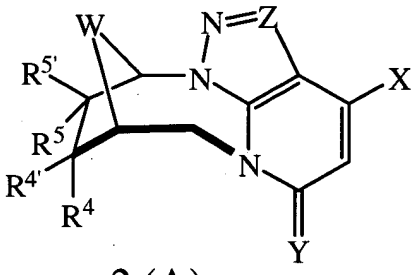

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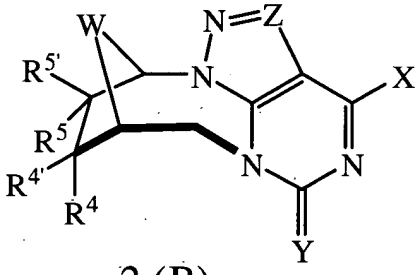

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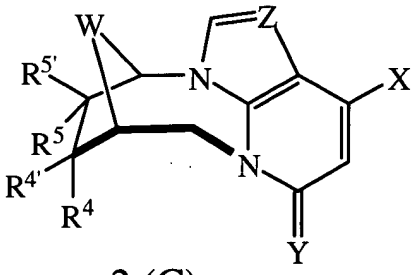

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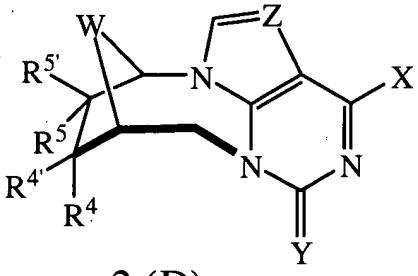

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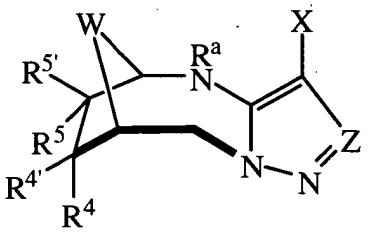

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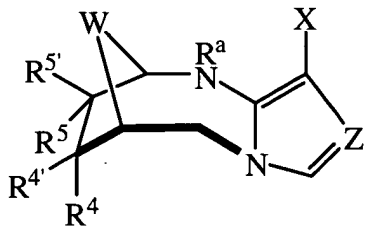

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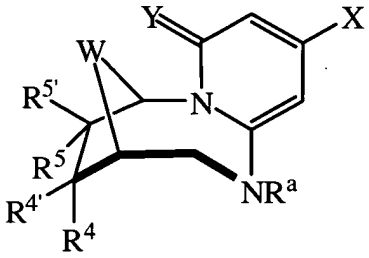

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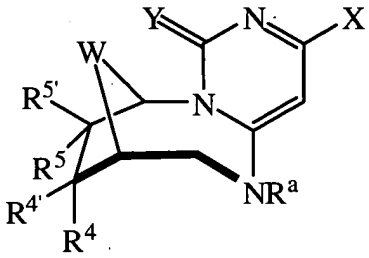

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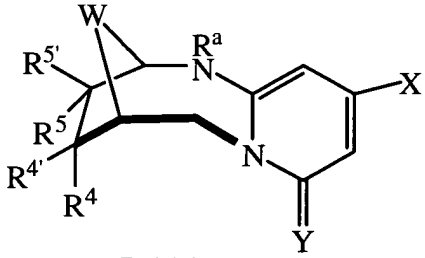

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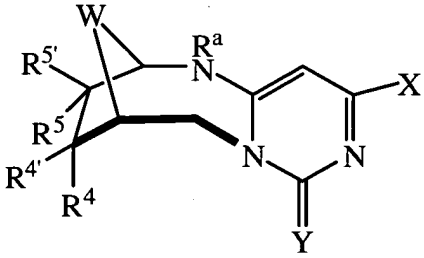

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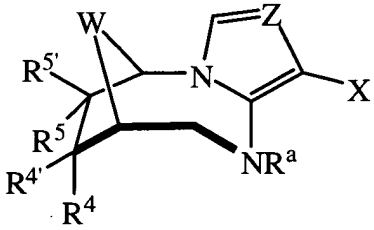

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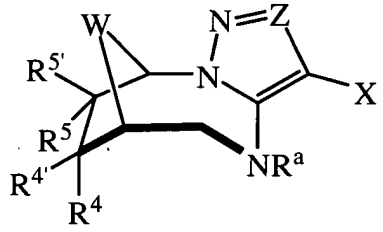

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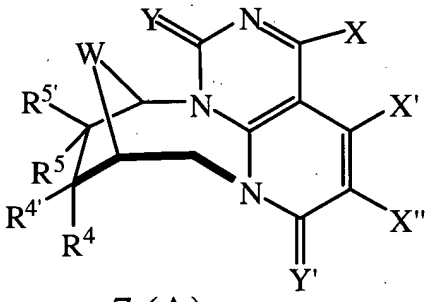

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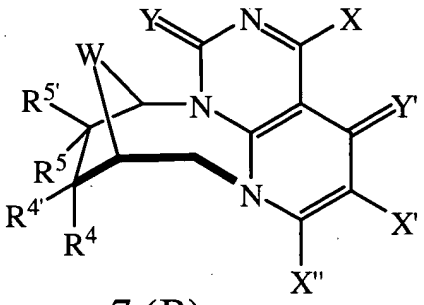
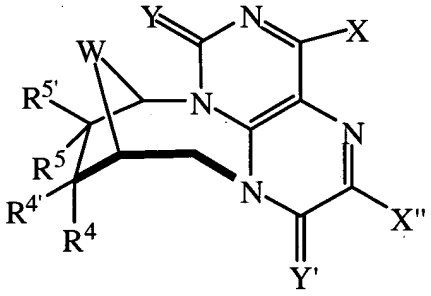


7 (B)



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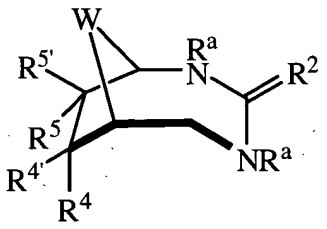


8 (A)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I) pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c"}$, OH, OR^c, SH, or SR^c;

(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

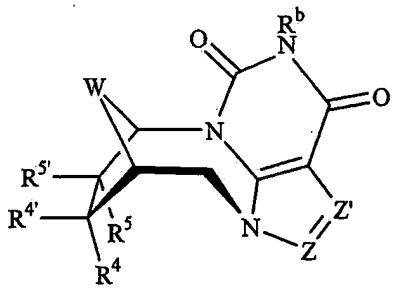
(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(i) each R^c, $R^{c'}$, and $R^{c"}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(j) W is O or CH_2;

optionally with a pharmaceutically acceptable carrier.

7. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) each Z and Z' is independently CH, CX, or N;

(f) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

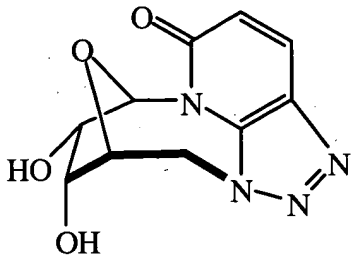
(g) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$;

(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2;

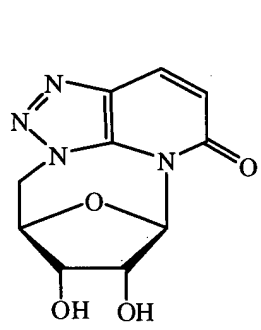
optionally with a pharmaceutically acceptable carrier.

8. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula:



or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

9. (Withdrawn): A method for the treatment of an HCV infection in a host comprising administering an effective amount of a compound of the formula:



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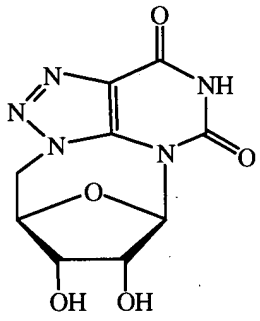
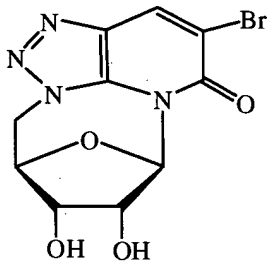
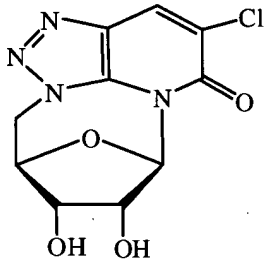


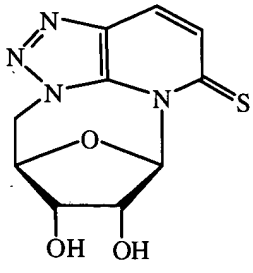
1 (K)



1 (L)



1 (M)



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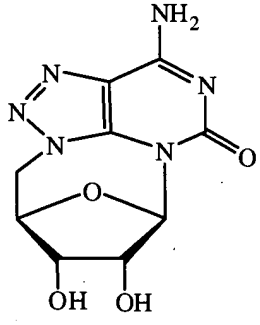

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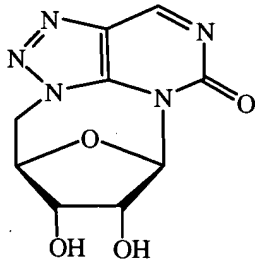

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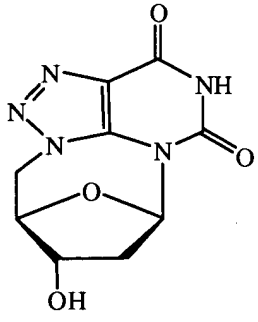

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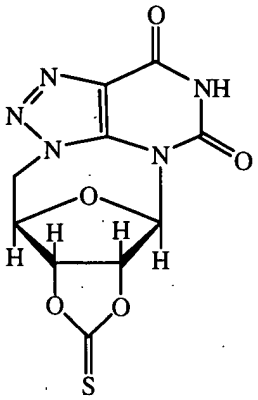
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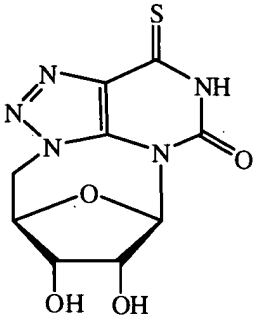
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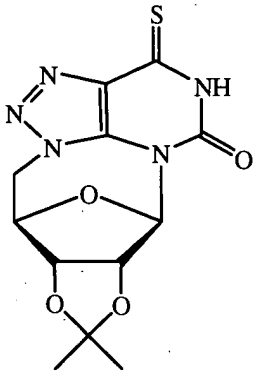
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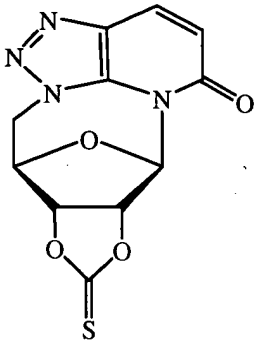
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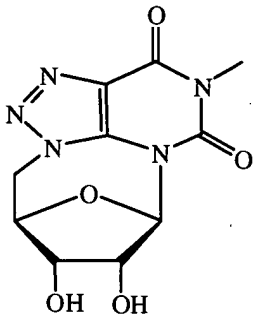
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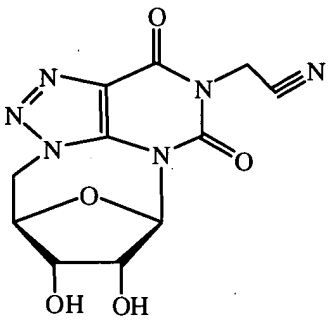
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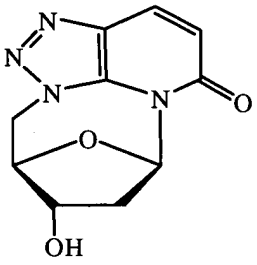
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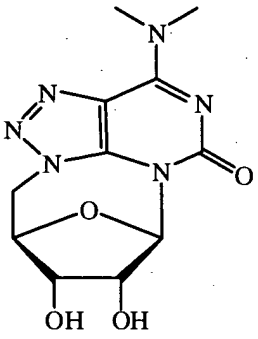
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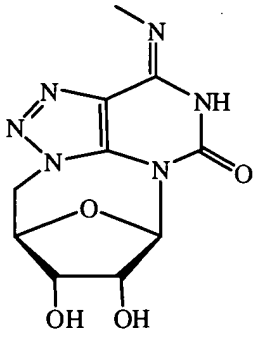
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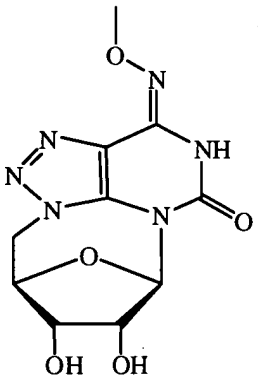
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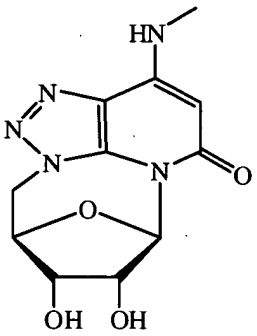
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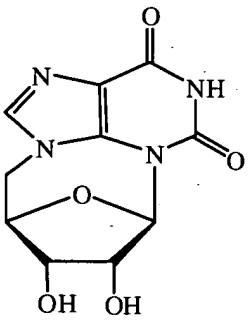
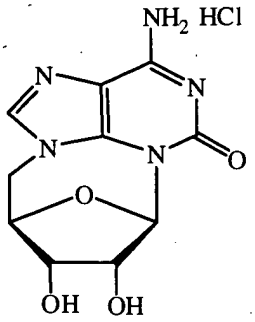
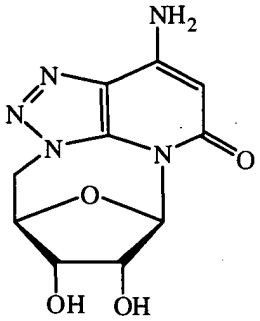
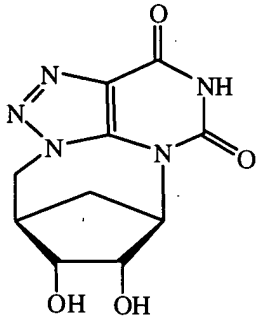

1 (AC)



1 (AD)



1 (AE)



1 (AF)

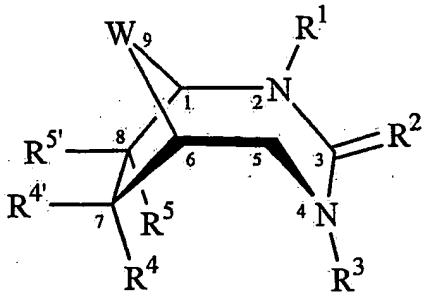
or a pharmaceutically acceptable salt thereof, optionally with a pharmaceutically acceptable carrier.

10. (Withdrawn): The method of any one of claims 1, 6, 7, 8, or 9, further comprising administering to the host in combination and/or alternation one or more effective anti-viral agents, optionally with a pharmaceutically acceptable carrier.

11. (Withdrawn): The method of claim 10, wherein the anti-viral agent is selected from the group consisting of ribavirin, interferon, pegylated interferon alfa –2a, interferon alfacon-1, natural interferon, albinterferon alpha 2b,interferon beta-1a, omega interferon, oral interferon alpha, interferon gamma-1b, interleukin-10, merimebodib, amantadine, hepatitis C immune globulin, levovirin, viramidine, thymosin alfa-1, histamine dihydrochloride, and telaprevir.

12. (Withdrawn): The method of any one of claims 1, 6, 7, 8, or 9, wherein the host is a human.

13. (Currently Amended): A compound of the formula (I):



(I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^1 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(e) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(f) R^3 is hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(g) alternatively if R^2 is NR', then R^1 or R^3 can come together with NR' to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(h) if R^2 is CR'_2, then R^1 or R^3 can come together with CR'_2 to form a substituted or unsubstituted 5-7 membered ring that can include one or more heteroatoms; or

(i) if R^2 is CR'_2, then R^1 and R^3 can come together with CR'_2 to form a substituted or unsubstituted bicyclic ring that can include one or more heteroatoms; and

(j) W is O or CH_2;

~~optionally with a pharmaceutically acceptable carrier;~~ provided that when W is O, $R^{4'}$ is hydroxyl, and R^1, R^3, R^4, R^5, and $R^{5'}$ are hydrogen, R^2 is not NH and that when R^2 is CR'_2, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, the bicyclic ring formed is not a xanthinyl ring wherein R^1 and R^2 or R^2 and R^3 form together the five-membered ring or an 8-azaxanthinyl ring wherein R^2 and R^3 form together the five-membered ring; and

provided that the compound is not 5',3-cyclo-isoguanosine.

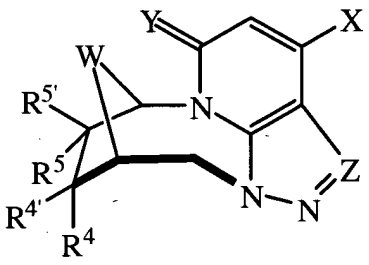
14. (Original): The compound of claim 13, wherein R^5 and/or $R^{5'}$ is OH.

15. (Original): The compound of claim 13, wherein R^5 or $R^{5'}$ is a residue of an amino acid.

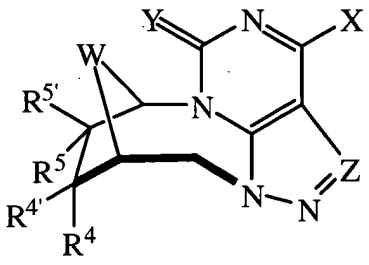
16. (Original): The compound of claim 15, wherein the amino acid is valine.

17. (Original): The compound of claim 15, wherein the amino acid is L-valine.

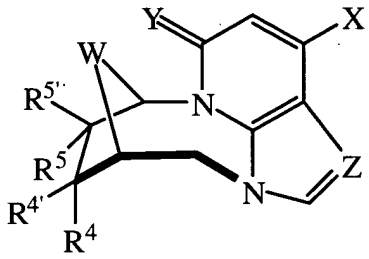
18. (Currently Amended): A compound of the general formula 1 (A-D):



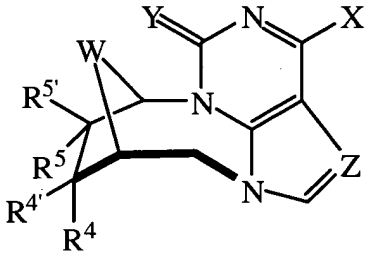
1 (A)



1 (B)



1 (C)



1 (D)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) Y is O, S, NH, NR^c, NOR^c, or Se;

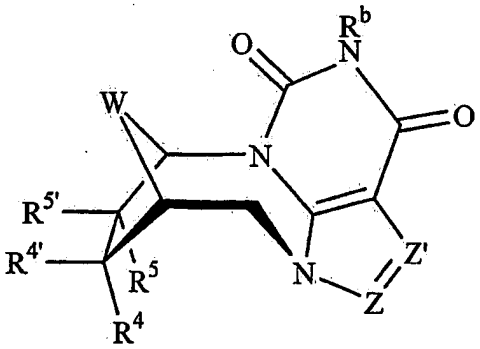
(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(h) W is O or CH_2;

~~optionally with a pharmaceutically acceptable carrier;~~ provided that for compounds of formula 1 (B), when X is OH, Y is O, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N; and

provided that for compounds of formula 1 (D), when X is OH, Y is O, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N.

19. (Currently Amended): A compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N and Z' is CH or CX;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

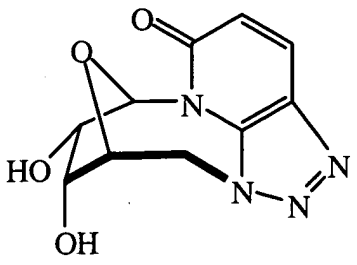
(f) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$;

(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(h) W is O or CH_2[[;]]

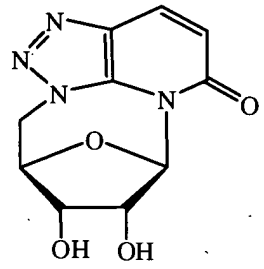
~~optionally with a pharmaceutically acceptable carrier~~.

20. (Currently Amended): A compound of the formula:



or a pharmaceutically acceptable salt thereof~~, optionally with a pharmaceutically acceptable carrier~~.

21. (Currently Amended): A compound of the formula: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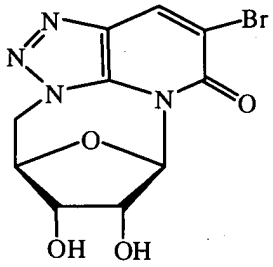
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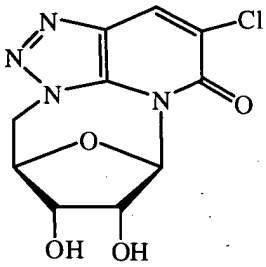
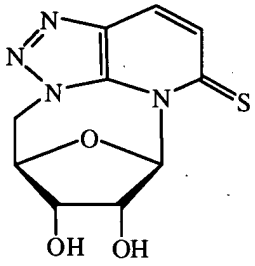

1 (M)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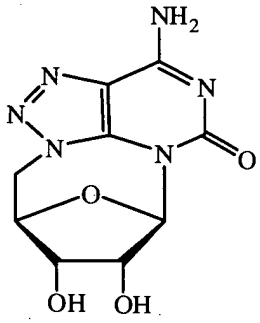
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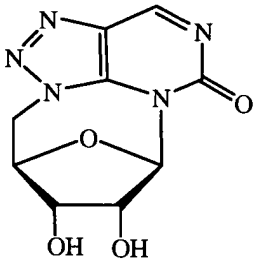
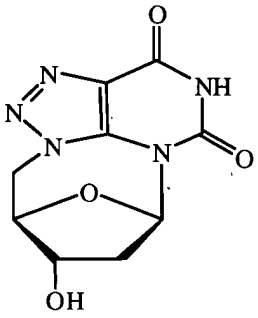
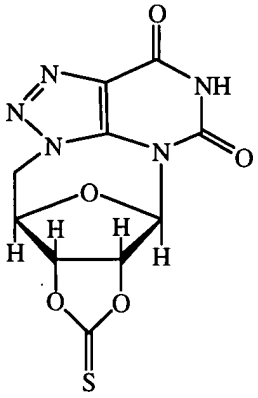

1 (P)


1 (Q)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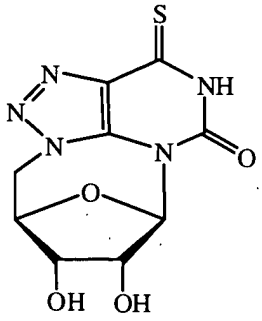
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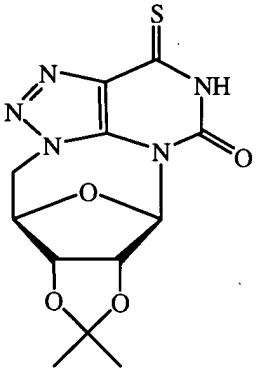
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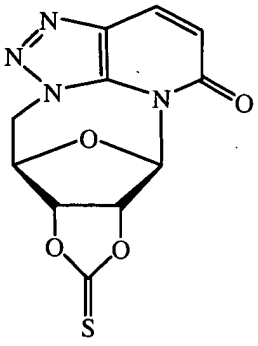
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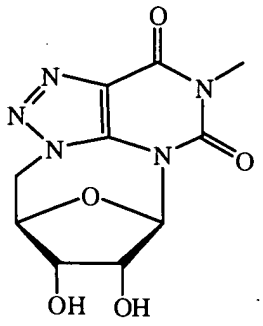
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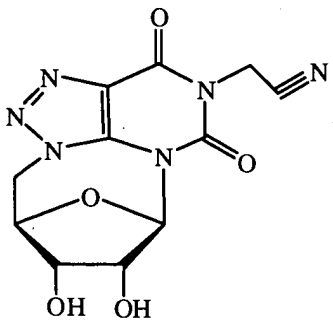
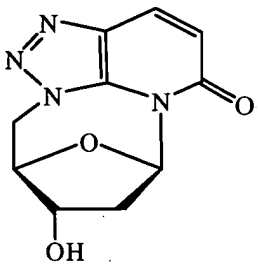
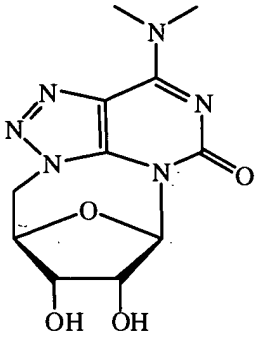
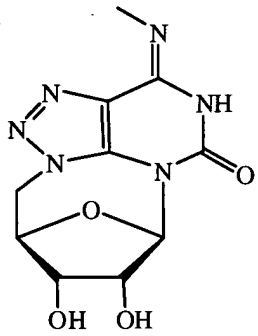
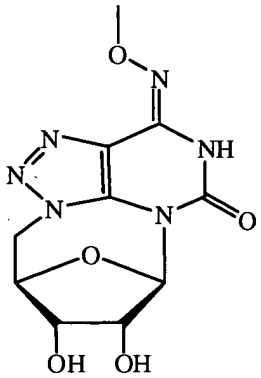
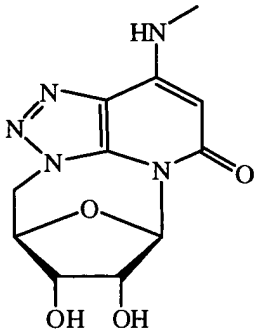

1 (W)

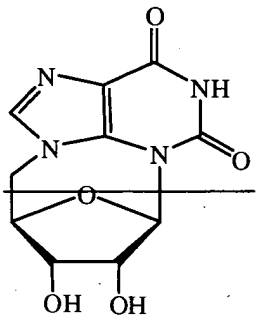

1 (X)

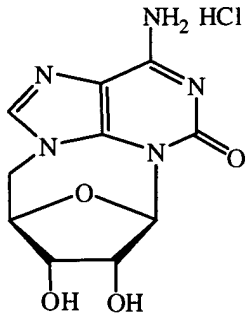

1 (Y)

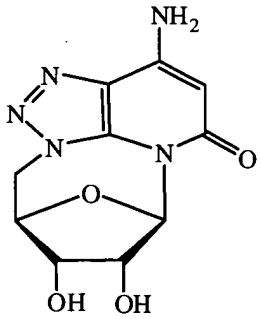

1 (Z)

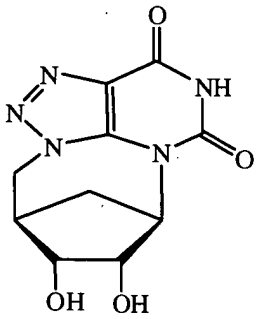

1 (AA)


1 (AB)


1 (AC)


1 (AD)


1 (AE)


1 (AF)

or a pharmaceutically acceptable salt thereof~~, optionally with a pharmaceutically acceptable carrier~~.

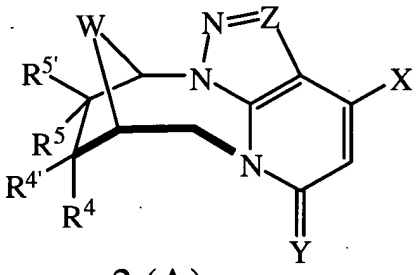
22. (Previously Presented): A pharmaceutical composition comprising an effective amount of any one of the compounds of claims 13, 18, 19, 20, 21, 25, 26, 27, 29, 30, 33, 34, or 36 together with a pharmaceutically acceptable carrier.

23. (Previously Presented): A pharmaceutical composition comprising an effective amount of any one of the compounds of claims 13, 18, 19, 20, 21, 25, 26, 27, 29, 30, 33, 34, or 36 together with one or more effective anti-viral agents, optionally with a pharmaceutically acceptable carrier.

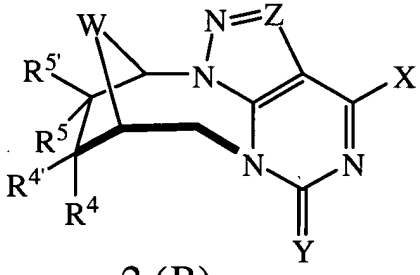
24. (Previously Presented): The pharmaceutical composition of claim 23, wherein the anti-viral agent is selected from the group consisting of ribavirin, interferon, pegylated interferon alfa –2a, interferon alfacon-1, natural interferon, albinterferon alpha 2b,interferon beta-1a, omega interferon, oral interferon alpha, interferon gamma-1b, interleukin-10, merimebodib, amantadine, hepatitis C immune globulin levovirin, viramidine thymosin alfa-1, histamine dihydrochloride, and telaprevir.

25. (Previously presented): The compound of claim 13, wherein W is oxygen.

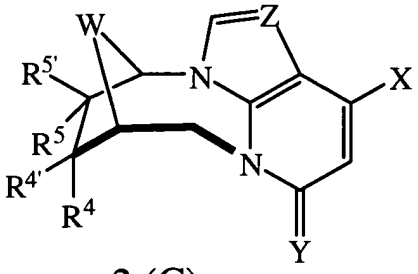
26. (Currently Amended): A compound of the general formula 2 (A-D), 3 (A-B), 4 (A-B), 5 (A-B), 6 (A-B), 7 (A-C), or 8 (A):



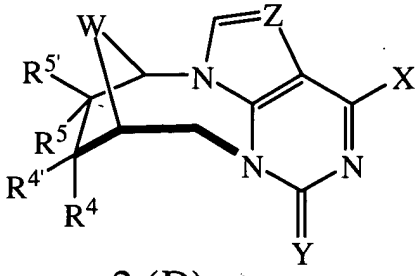
2 (A)



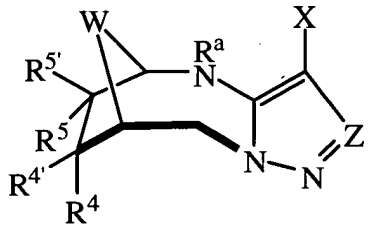
2 (B)



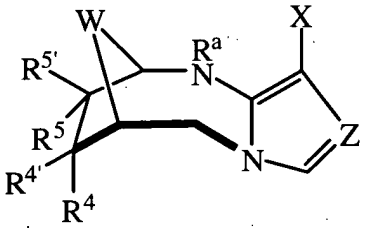
2 (C)



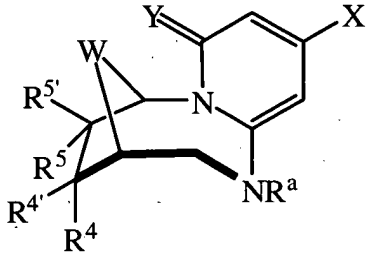
2 (D)



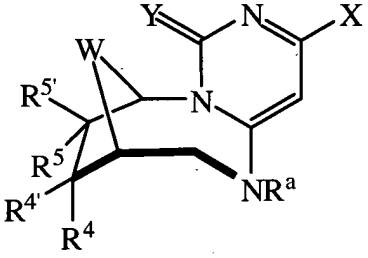
3 (A)



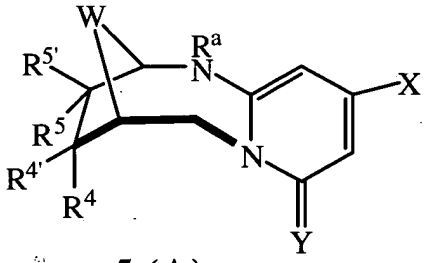
3 (B)



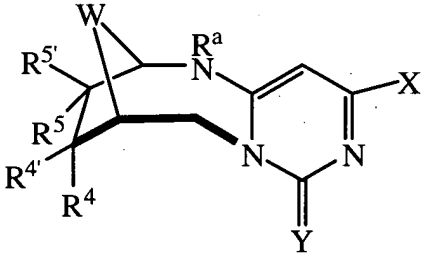
4 (A)



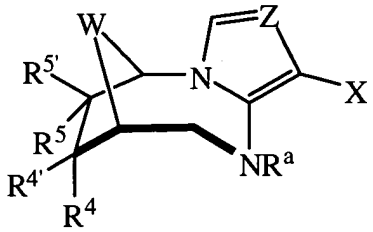
4 (B)



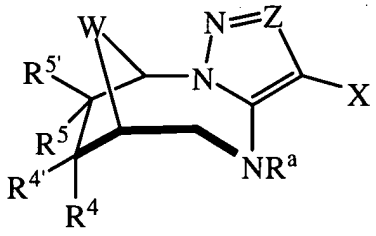
5 (A)



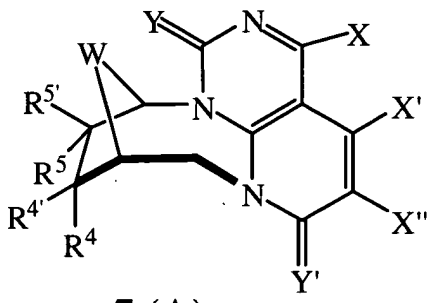
5 (B)



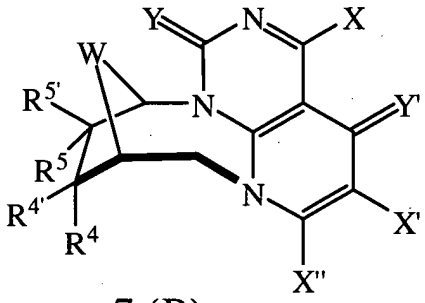
6 (A)



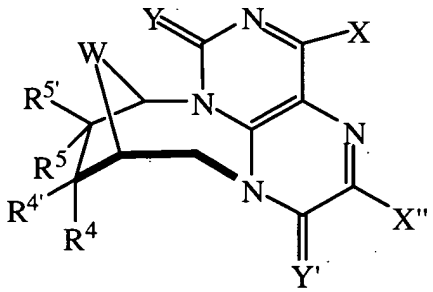
6 (B)



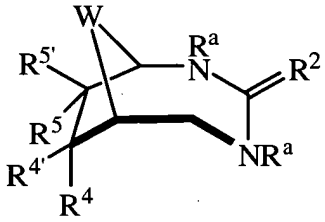
7 (A)



7 (B)



7 (C)



8 (A)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

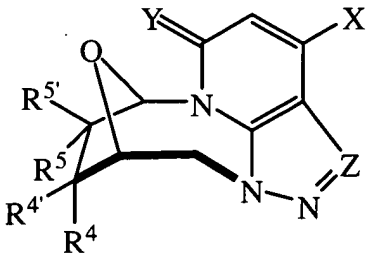
(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6;

(i) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

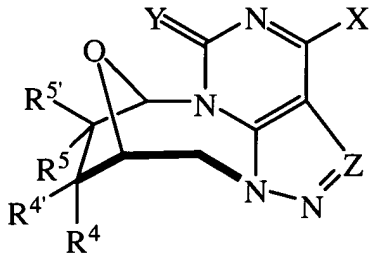
(j) W is O or CH_2;

~~optionally with a pharmaceutically acceptable carrier;~~ provided that for compounds of formula 2 (D), when X is OH or NH_2, Y is O, W is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N and for compounds of formula 8 (A), when R^2 is NH, R^a is hydrogen, W is O, and R^4, R^5, and $R^{5'}$ are hydrogen, $R^{4'}$ is not hydroxyl.

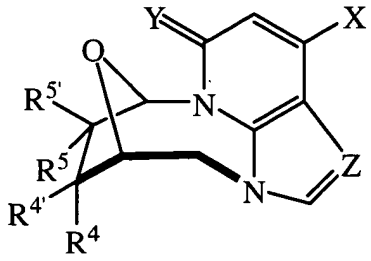
27. (Currently Amended): A compound of the general formula 1 (E-H):



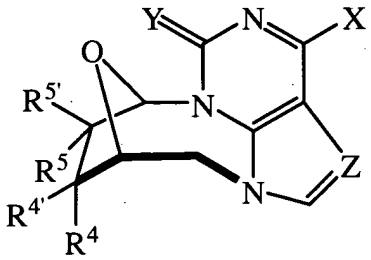
1 (E)



1 (F)



1 (G)



1 (H)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) Y is O, S, NH, NR^c, NOR^c, or Se; and

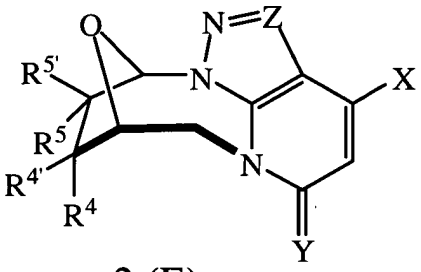
(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl;

~~optionally with a pharmaceutically acceptable carrier~~ provided that for compounds of formula 1 (F), when X is OH, Y is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N; and

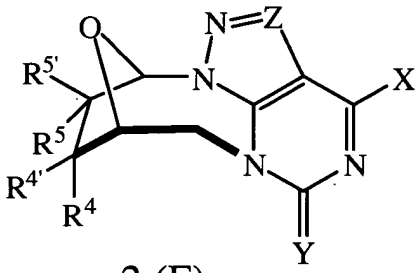
provided that for compounds of formula 1 (H), when X is OH, Y is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N.

28. (Previously presented): A compound of claim 27 wherein the compound is of formula 1H.

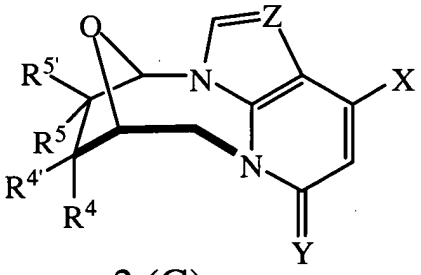
29. (Currently Amended): A compound of the general formula 2 (E-H), 3 (C-D), 4 (C-D), 5 (C-D), 6 (C-D), 7 (D-F), or 8 (B):



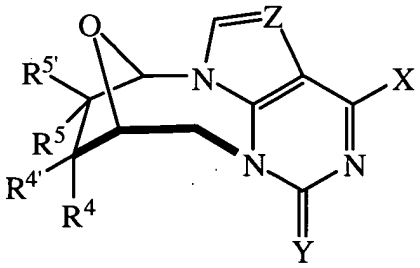
2 (E)



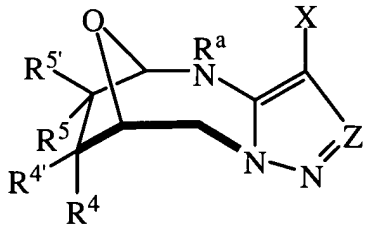
2 (F)



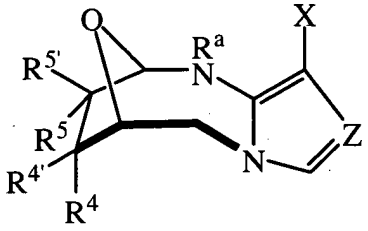
2 (G)



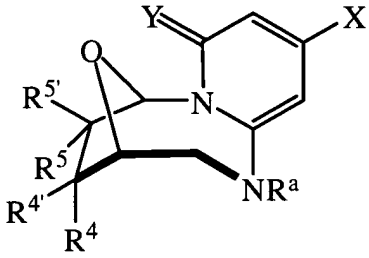
2 (H)



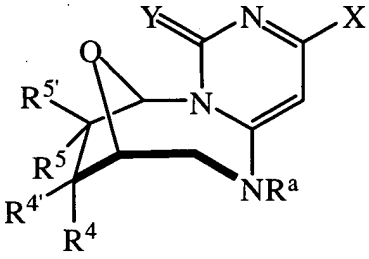
3 (C)



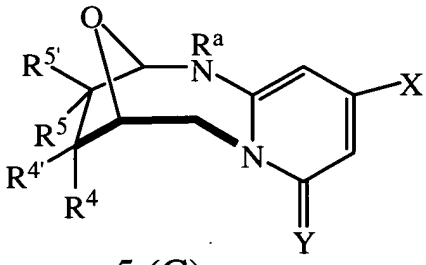
3 (D)



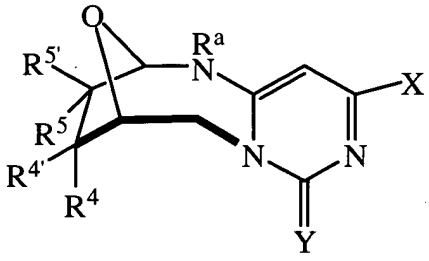
4 (C)



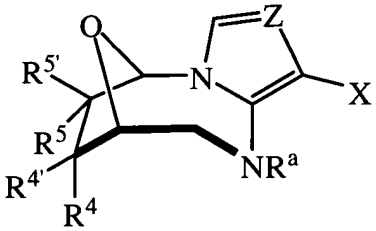
4 (D)



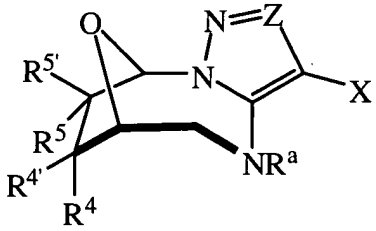
5 (C)



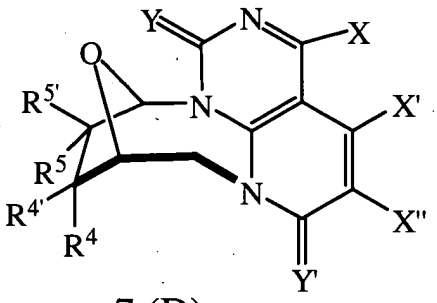
5 (D)



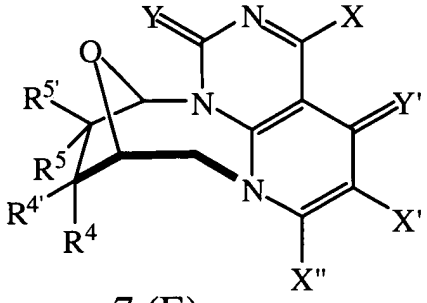
6 (C)



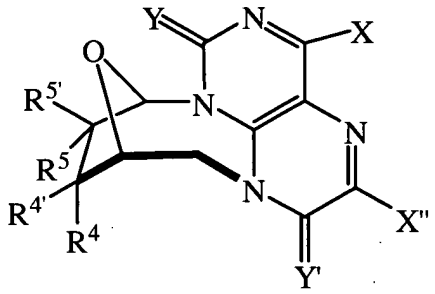
6 (D)



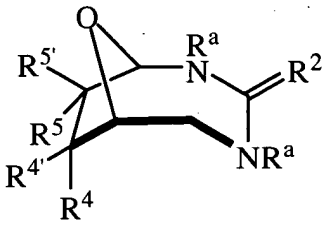
7 (D)



7 (E)



7 (F)



8 (B)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) R^2 is oxygen, sulfur, NR', or CR'_2, wherein each R' is independently hydrogen, lower alkyl, alkylene, alkenyl, aryl, or aralkyl of C_1-C_6;

(e) Z is CH, CX, or N;

(f) each X, X', and X" is independently hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

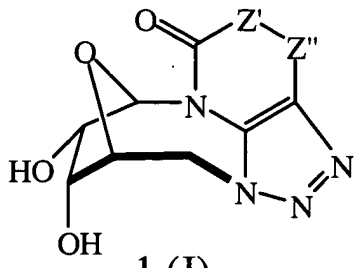
(g) each Y and Y' is independently O, S, NH, NR^c, NOR^c, or Se;

(h) each R^a is independently hydrogen, lower alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, aminoalkyl, aminoaryl, or aminoacyl of C_1-C_6; and

(i) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl;

~~optionally with a pharmaceutically acceptable carrier~~ provided that for compounds of formula 2 (H), when X is OH or NH_2, Y is O, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z is not N and for compounds of formula 8 (B), when R^2 is NH, R^a is hydrogen, and R^4, R^5, and $R^{5'}$ are hydrogen, $R^{4'}$ is not hydroxyl.

30. (Currently Amended): A compound of the general formula:



1 (I)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each Z' and Z" is independently CH, CX, or N;

(b) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c"}$, OH, OR^c, SH, or SR^c; and

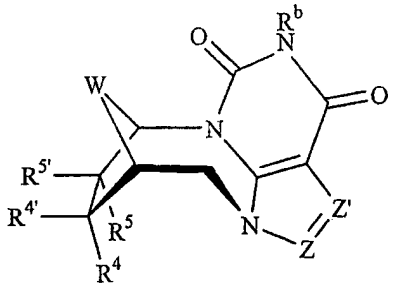
(c) each R^c, $R^{c'}$, and $R^{c"}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl[[;]]

~~optionally with a pharmaceutically acceptable carrier~~.

31. (Currently Amended): The compound of claim 21 wherein the compound [[is]] has formula 1S.

32. (Currently Amended): The compound of claim 21 wherein the compound [[is]] has formula 1O.

33. (Currently Amended): A compound of the general formula:



or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is independently CH or CX and Z' is independently CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) R^b is R^c, OR^c, NH_2, NHR^c, or $NR^cR^{c'}$; and

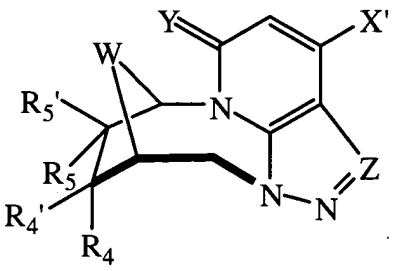
(g) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(h) W is O or CH_2;

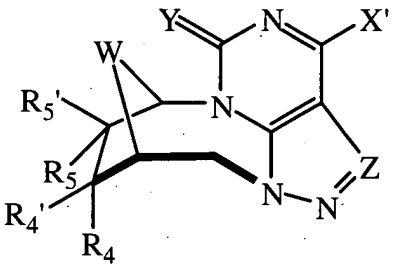
provided that when Z is CH, R^b is hydrogen, $R^{4'}$ is hydroxyl, R^4 is hydrogen, $R^{5'}$ is hydroxyl, and R^5 is hydrogen, Z' is not N

~~optionally with a pharmaceutically acceptable carrier~~.

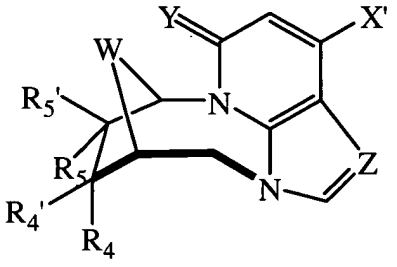
34. (Currently Amended): A compound of the general formula 1 (AG-AJ):



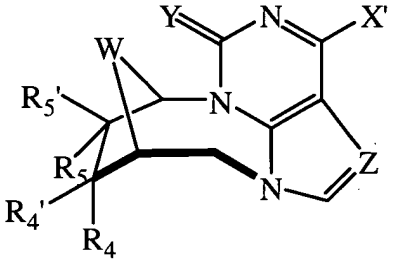
1 (AG)



1 (AH)



1 (AI)



1 (AJ)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) X' is alkyl;

(g) Y is O, S, NH, NR^c, NOR^c, or Se;

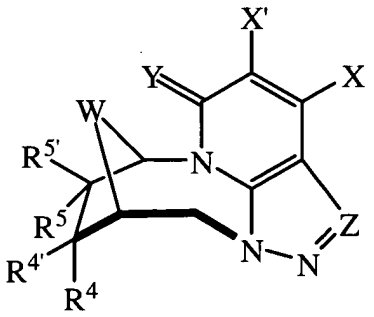
(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2[[;]]

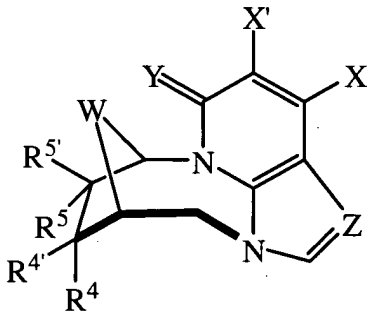
~~optionally with a pharmaceutically acceptable carrier~~.

35. (Previously presented): The compound of claim 34, wherein W is oxygen.

36. (Currently Amended): A compound of the general formula 1 (AK) or 1 (AL):



1 (AK)



1 (AL)

or a pharmaceutically acceptable salt thereof, wherein:

(a) each R^4 and $R^{4'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl,

alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^4 and $R^{4'}$ is hydrogen;

(b) each R^5 and $R^{5'}$ is independently hydrogen, halogen (F, Br, Cl, or I), pseudohalogen, NO_2, lower alkyl of C_1-C_6, halogenated lower alkyl, hydroxyl, alkoxy, CH_2OH, CH_2OR^6, NH_2, NR^6R^7, or a residue of an amino acid; wherein at least one of R^5 and $R^{5'}$ is hydrogen;

(c) each R^6 and R^7 is independently hydrogen, alkyl, halogenated alkyl, alkylene, alkenyl, carbocycle, aryl, heterocycle, heteroaryl, aralkyl, or acyl;

(d) Z is CH, CX, or N;

(e) X is hydrogen, halogen (F, Cl, Br, or I), NH_2, NHR^c, $NR^cR^{c'}$, $NHOR^c$, $NR^cNR^{c'}R^{c''}$, OH, OR^c, SH, or SR^c;

(f) X' is halogen (F, Cl, Br, or I);

(g) Y is O, S, NH, NR^c, NOR^c, or Se;

(h) each R^c, $R^{c'}$, and $R^{c''}$ independently is hydrogen, lower alkyl, lower alkenyl, aryl, or arylalkyl such as unsubstituted or substituted phenyl or benzyl, cycloalkyl, or cyclopropyl; and

(i) W is O or CH_2[[;]]

~~optionally with a pharmaceutically acceptable carrier~~.

37. (Previously presented): The compound of claim 36, wherein W is oxygen.